REMARKS

Applicant thanks the Examiner for the very thorough consideration given the present application.

Claims 7-17, 19 and 20 are now present in this application. Claims 7, 15, 17 and 20 are independent.

Claims 1-6, 18 and 21-23 have been canceled, and claims 7, 15, 17 and 20 have been amended. Reconsideration of this application, as amended, is respectfully requested.

Priority Under 35 U.S.C. § 119

Applicant thanks the Examiner for acknowledging Applicant's claim for foreign priority under 35 U.S.C. § 119, and receipt of the certified priority document.

Drawings

Applicant has not received a Notice of Draftsperson's Patent Drawing Review PTO-948 or other indication of whether or not the formal drawings have been approved by the Draftsperson. Clarification in the next Office Action is respectfully requested.

Restriction Requirement

The Examiner has made the Restriction Requirement final, and has withdrawn claims 1-6, 22 and 23 from further consideration. By this Amendment, Applicant has canceled non-elected claims 1-6, 22 and 23. Applicant reserves the right to file a divisional application directed to claims 1-6, 22 and 23 at a later date if so desired.

Rejection Under 35 U.S.C. § 112, 2nd Paragraph

Claim 18 stand rejected under 35 U.S.C. § 112, 2nd Paragraph. This rejection is respectfully traversed.

While not conceding the appropriateness of the Examiner's rejection, but merely to advance prosecution of the instant application, Applicant respectfully submits that claim 18 has been cancelled, thus rendering this rejection under 35 U.S.C. § 112 moot. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Rejection Under 35 U.S.C. § 102

Claims 17-21 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,177,023 to Shang et. al. (Shang). This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

Shang is directed to an apparatus and method for holding a substrate on a support layer in a processing chamber. To accomplish this, Shang actually seeks to induce attractive charges rather than to reduce attractive charges. This is summarized in Col.7, line 65 through Col.8, line 3 of Shang. Particularly, in this portion Shang recites "bottom surface 173 of substrate 165 is left with an induced positive charge, and top surface 23 of support layer 22 is left with an induced negative charge. By Coulomb electrostatic attraction, substrate 165 is held substantially flat against support layer 22."

Therefore Shang fails to disclose wherein said positioning reduces electrostatic attraction between said substrate and said electrode plate as recited in independent claim 17, and similarly stated in independent claim 20. Claims 18 and 21 have been cancelled, thus rendering their rejection under 35 U.S.C. § 102 moot.

Claim 19 depends on claim 17, and therefore is patentable for at least the reasons stated with respect to independent claim 17. Reconsideration and withdrawal of this art grounds of rejection are respectfully requested.

Rejections under 35 U.S.C. § 103

Claims 7-12 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,665,167 to Deguchi et al. (Deguchi) in view of U.S. Patent No. 5,874,361 to Collins et al. (Collins) and further in view of U.S. Patent No. 6,096,572 to Nakamura. This rejection is respectfully traversed.

Deguchi discloses a static chuck 210 which statically attracts and holds a semiconductor wafer 205 (see Deguchi, Col.7, lines 64-65). A static chuck 210 is provided with a static chuck sheet 211 serving as a holding portion that attracts and holds the semiconductor wafer 205 (see Fig. 5). The static chuck sheet 211 is formed of an electrolytic copper foil 212 as a center layer and two insulation films 213 as outer layers. Both the surfaces of the electrolytic copper foil 212 are adhered to the insulation films 213 with a polyimide type adhesive agent. Thus, the electrolytic copper foil 212 is sandwiched by the insulation films 213 (Deguchi, Col.7, line 66-Col.8, line7).

The insulating films 213, coated with a polyimide type adhesive agent, are asserted by the Examiner to read on "adhesive tape". However, it is clear that these films, being part of static chuck 211, function in conjunction therewith to create and promote electrostatic attraction, as opposed to reducing electrostatic attraction. Therefore, Deguchi fails to disclose or suggest, wherein said insulating tape reduces an electrostatic attraction between the second

electrode and the array substrate, as recited in independent claim 7, as amended. Neither Collins, nor Nakamura can fill this vacancy.

Claims 8-12 and 14 depend, either directly or indirectly on independent claim 7. Since neither Deguchi, nor Collins, nor Nakamura discloses or suggests the above-recited features of independent claim 7, Deguchi, in view of Collins, and further in view of Nakamura, cannot render claims 7-12 and 14 obvious to one of ordinary skill in the art. Reconsideration and withdrawal of this art grounds of rejection are respectfully requested.

Claim 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Deguchi, Collins and Nakamura, as applied to claim 7, and further in view of U.S. Patent No. 5,985,104 to Westwood. This rejection is respectfully traversed.

While not conceding the appropriateness of the Examiner's rejection, but merely to advance prosecution of the instant application, Applicants respectfully submit that claim 13 depends on claim 7, and therefore is patentable at least for the reasons stated with respect to independent claim 7. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Claims 15 and 16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Deguchi in view of Nakamura. This rejection is respectfully traversed.

Deguchi, argued above with respect to independent claim 7, fails to disclose or suggest wherein said insulating tape reduces an electrostatic attraction between the second electrode and the array substrate, as recited in independent claim 7, as amended. Similarly, Deguchi fails to disclose or suggest wherein said insulating tape reduces an electrostatic attraction between the second electrode and the array substrate, as recited in independent claim 15, as amended. Nakamura cannot fill this vacancy.

Claim 16 depends on claim 15. Since neither Deguchi, nor Nakamura discloses or suggests the above-recited features of independent claim 15, Deguchi, in view of Nakamura cannot render claims 15 and 16 obvious to one of ordinary skill in the art. Reconsideration and withdrawal of this art grounds of rejection are respectfully requested.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Percy L. Square, Registration No. 51,084, at (703) 205-8034, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By: _____
Joseph A. Kolasch
Reg. No.: 22,463

JAK/PLS:asc

P.O. Box 747
Falls Church, Virginia 22040-0747
Telephone: (703)205-8000

Attachment: Version with Markings to Show Changes Made

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Claims 1-6, 18 and 21-23 have been canceled.

The claims have been amended as follows:

7. (Amended) A method for preventing an array substrate from being damaged due to an electrostatic force after a dry-etching process, comprising:

providing a dry-etching apparatus having:

a) a process chamber having a gas inlet, the gas inlet allowing a reactive gas into the process chamber;

b) a first electrode arranged at a predetermined location in the process chamber;

c) a second electrode in the chamber spaced apart from and opposite to the first electrode, having an insulating tape thereon, a plurality of lift pins received in a plurality of holes, the insulating tape being arranged between the plurality of the lift pins, wherein said insulating tape reduces an electrostatic attraction between the second electrode and the array substrate; and

d) a power source for applying voltages to the first and second electrodes;

arranging the array substrate on the second electrode;

dry-etching the array substrate; and

separating the array substrate from the second electrode using the lift pins.

15. (Amended) A method for preventing an array substrate from being damaged due to an electrostatic force after a dry-etching process, comprising:

providing a dry-etching apparatus having a first and a second electrodes in a process chamber, the second electrode having a plurality of holes and lift pins, and an insulating tape thereon, wherein said insulating tape reduces an electrostatic attraction between the second electrode and the array substrate;

arranging the array substrate on the second electrode;

dry-etching the array substrate; and

separating the array substrate from the second electrode using the lift pins.

17. (Amended) A method of processing a substrate for a liquid crystal display (LCD) device, the method comprising:

providing an electrode plate;

positioning a substrate at a predetermined distance from the electrode plate to obtain an intermediate structure, wherein said positioning reduces electrostatic attraction between said substrate and said electrode plate;

processing the intermediate structure; and

removing the substrate from the electrode plate.

20. (Amended) A method of processing a substrate for a liquid crystal display (LCD) device, the method comprising:

providing an electrode;

providing an intermediate material on the electrode;

providing a substrate on the intermediate material of the electrode to obtain an intermediate structure;

processing the intermediate structure; and

removing the substrate from the electrode utilizing a plurality of pins formed on the electrode to push the substrate away from the electrode, wherein the intermediate material reduces electrostatic attraction between the substrate and the electrode.